



# Exotic Newcastle Disease

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**Information from the  
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**Exotic Newcastle disease (END)** is a contagious and fatal viral disease affecting most species of birds. Previously known as Velogenic Viscerotropic Newcastle Disease (VVND), Exotic Newcastle is a foreign animal disease in the U.S. and is considered the most infectious disease of birds and poultry. END is so virulent that many birds die before showing any clinical signs. A death rate of 100 percent can occur in unvaccinated poultry flocks and jeopardize a state's poultry production and limits international trading opportunities.

## Impact

An outbreak of END is extremely difficult and costly to eradicate. In 1971, southern California experienced a major outbreak in commercial poultry flocks. The disease threatened the California poultry industry, which ranks first in the nation for egg production and fourth for turkey production. Had the disease spread beyond the state's borders, the entire country's egg and poultry supply would have been jeopardized. The outbreak in California was finally eradicated in 1974, but the toll was high. In all 1,341 infected flocks were identified, and nearly 12 million birds were destroyed. Eradication efforts cost taxpayers \$56 million, and severely disrupted the operations of many producers. Consumers paid the price, too, as prices of poultry and poultry products increased. In October 2002, END was again diagnosed in California in non-commercial flocks. As of early January 2003, the disease had spread to at least three commercial poultry operations, and more than 600 veterinarians and animal health inspectors were working to eradicate the outbreak.

## How does END spread?

The END virus is spread when the bodily discharges of infected birds come in contact with healthy birds. Discharges, which contain high concentrations of the virus, include droppings, or secretions from the bird's nose, mouth or eyes. In close confinement, such as commercial operations, the disease can spread like wildfire. The virus also can be picked up on shoes, clothing or equipment and can be carried from an infected flock to a healthy one. That is why proper biosecurity measures must be followed when owners, work crews, service personnel, manure haulers, renderers or feed trucks come to a poultry premise. END can survive for several weeks in a warm and humid environment on birds' feathers, manure, and other materials. It can survive indefinitely in frozen material. However, the virus is destroyed rapidly by dehydration and by the ultraviolet rays in sunlight. Smuggled pet birds, especially Amazon parrots from Latin America, pose a great risk of introducing END into U.S. flocks. Amazon parrots that are carriers of the disease but do not show symptoms are capable of shedding the END virus for more than 400 days.

## END: Clinical Signs

END affects the bird's respiratory, nervous, and digestive systems. The incubation period for the disease ranges from 2-15 days. Although the following are classical signs of END, some birds may die so quickly, they show no signs before death.

## Signs can include:

- Respiratory: sneezing, gasping for air, nasal discharge, coughing
- Digestive: greenish, watery diarrhea
- Nervous: depression, muscular tremors, drooping wings, twisting of head and neck, circling, complete paralysis
- Partial to complete drop in egg production.
- Production of thin-shelled eggs
- Swelling of the tissues around the eyes and in the neck
- Sudden death
- Increased death loss in a flock

## How can poultry producers help control & prevent END?

Eradicating END from poultry operations requires strict quarantines and in-depth surveillance.

All infected or exposed flocks must be destroyed. Poultry producers should ensure the following biosecurity measures are taken to prevent the introduction of the disease to commercial, non-commercial, and hobby flocks.

- Allow only essential workers and vehicles on the premise.
- Don't keep pet birds on the farm. Don't hire employees who own birds or poultry.
- Don't allow vaccination crews, catching crews, and other service personnel on the premise if they have been in contact with other poultry operations within the previous 24 hours.
- Clean and disinfect the tires and undercarriages of any vehicles entering or leaving the premises. (No "germs" in! No "germs" out!)
- Provide clean clothing and disinfectant for employees' boots or shoes.
- Maintain an "all-in, all-out" philosophy of flock management with a single age flock.
- Control the movement of poultry and products from farm to farm. Do NOT add birds unless you know the health status of the source flock!

- Do not "skim" mature birds from a flock for sale to a live-poultry market.
- Clean and disinfect poultry houses between each lot of birds.
- Control the movement associated with the disposal and handling of bird carcasses, litter, and manure.
- Avoid visiting other poultry operations.
- Protect flocks from wild birds that may try to nest in poultry houses or feed with domesticated birds.

**• Please call Rollins Diagnostic Lab (919) 733-3986 for instructions on what to do with any diseased birds or dead birds. Your help is crucial in the prevention and early detection of this devastating disease!**

## How can pet bird & backyard poultry owners help control & prevent END?

Besides jeopardizing the commercial industry, END also poses a threat to the caged-bird industry and poultry hobbyists. Birds smuggled into the U.S. illegally bypass the quarantining and testing procedures of the U.S. Department of Agriculture (USDA). If the birds are carrying the virus, owners and animal health officials may not discover the infection until an outbreak occurs. To protect the U.S. poultry and bird industry, owners of pet birds should:

- Require suppliers to provide certification that birds were legally imported, or are of U.S. stock. Insist that the suppliers ensure birds are healthy prior to shipment, and that the birds will be transported in new or thoroughly disinfected containers.
  - Maintain records of all purchases, sales and shipments of birds.
  - Isolate all newly purchased birds for at least 30 days. Restrict the movement between new and old birds, and practice good biosecurity!
- Amazon parrots are difficult to raise domestically. Sellers offering a large number of young parrots should be suspected of smuggling or of purchasing illegally imported birds.

## How should suspicious cases be reported?

Don't wait! If you have large, unexpected death loss or illness among your birds, report it to your veterinarian and to the NCDA & CS (919) 733-3986 so samples may be collected for diagnosis at the Poultry Diagnostic Laboratory in your area. In the meantime, restrict traffic onto the premise to prevent the potential spread of disease!

### Poultry Diagnostic Labs:

- Arden: 828 684-8188
- Elkin: 336 526-2499
- Monroe: 704 289-6448
- Robbins: 910 948-2241
- Rose Hill: 910 289-2635